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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/059,171	01/31/2002	Takao Yonehara	00862.022499	6512
5514	7590	03/10/2004	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			NGUYEN, THANH T	
			ART UNIT	PAPER NUMBER
			2813	
DATE MAILED: 03/10/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/059,171

Applicant(s)

YONEHARA ET AL.

Examiner

Thanh T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 2,3 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/31/02, 8/19/02, 1/10/03
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

Claim 10 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention, the requirement having been traversed in Paper mailed 2/15/03.

Applicant's election with traverse of Group I, claims 1-9 drawn to a method claims is acknowledged. The traversal is on the ground(s) that the subject matter of all claims 1-10 is sufficiently related that a thorough search for the subject matter of any one group of the claims would encompass a search for the subject matter of the remaining claims. This is not found persuasive because claims 10 would require further search and for the reason of the last Office Action. The requirement is still deemed proper and is therefore made FINAL.

### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119 (a)-(d). The certified copy has been received.

### ***Information Disclosure Statement***

The information disclosure statement filed on 1/31/02, 8/19/02, 1/10/03 has been considered.

### ***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Oath/Declaration***

Oath/Declaration filed on 1/31/02 has been considered.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamazaki et al. (U.S. Patent No. 5,757,456).

Referring to figures 5a-5d, Yamazaki et al. teaches a method of manufacturing a display device, comprising:

The step of preparing a member having, on a separation layer (32), a semiconductor film (34/35 silicon) having a first region with a switching element (8) and a second region with a peripheral circuit (7);

The step of forming an image display portion (18) on the first region; and

The separation step of separating the first and second regions from the member together with the image display portion (see figures 5c-5d, separating the peeling layer (32) and the substrate from the first and second regions).

Regarding to claim 4, the member is obtained by forming the first and second regions on the surface of a substrate and implanting ions from the surface side to a predetermined depth to form the separation layer (see col. 7, lines 11-18).

Regarding to claim 7, the separation step is executed by injecting gas to or near a side surface of the separation layer (see figure 5c-5d, col. 7, lines 52-67, col. 8, lines 1-13).

Regarding to claim 8, separation step is executed under static pressure (see col. 7, lines 55-56).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 6, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. (U.S. Patent No. 5,757,456) as applied to claims 1, 7-8 above in view of Zhang (U.S. Patent No. 6,627,487).

Referring to figures 5a-5d, Yamazaki et al. teaches a method of manufacturing a display device, comprising:

The step of preparing a member having, on a separation layer (32), a semiconductor film (34/35 silicon) having a first region with a switching element (8) and a second region with a peripheral circuit (7);

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The step of forming an image display portion (18) on the first region; and

The separation step of separating the first and second regions from the member together with the image display portion (see figures 5c-5d, separating the peeling layer (32) and the substrate from the first and second regions).

Regarding to claim 4, the member is obtained by forming the first and second regions on the surface of a semiconductor substrate and implanting ions from the surface side to a predetermined depth to form the separation layer (see col. 7, lines 11-18).

Regarding to claim 7, the separation step is executed by injecting gas to or near a side surface of the separation layer (see figure 5c-5d, col. 7, lines 52-67, col. 8, lines 1-13).

Regarding to claim 8, separation step is executed under static pressure (see col. 7, lines 55-56).

However, the reference does not teaches the semiconductor substrate is a single-crystal silicon substrate, and reuse the remaining member after the separation steps.

Zhang teaches forming a substrate by using a single-crystal silicon or glass (see col. 1, lines 14-17).

Therefore, it would have been obvious to a person of ordinary skill in the requisite art at the time of the invention was made would substrate by using a single-crystal silicon instead of glass as in process of Yamazaki et al. as taught by Zhang because determining the optimum material for the layer only involved routine skill in the art.

It is obvious to reuse the remaining member after the separation step because it would reduced processing cost of forming the LCD.

***Allowable Subject Matter***

Claims 2-3, 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the prior art taught or suggested the combination of forming a porous layer film on the member then forming a semiconductor film, and then forming the first and second regions incorporated into claim 1.

The additional references cited in form PTO-892 show further method of manufacturing a semiconductor film. Specifically references (Ishikawa, U.S. 5,582,963) are particularly relevant to claimed manufacture which recited in claims 1-9. Ishikwa teaches method of manufacturing a display device, comprising: The step of preparing a member having, on a separation layer (401), a semiconductor film (404) having a first region with a switching element (1406) and a second region with a peripheral circuit (1407); The step of forming an image display portion (1403) on the first region; and The separation step of separating the first and second regions from the member together with the image display portion (see figures 4a-4b). This reference is deemed relevant and should be carefully reviewed before any amendment is filed.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Nguyen whose telephone number is (571) 272-1695, or by

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Email via address Thanh.Nguyen@uspto.gov. The examiner can normally be reached on Monday-Thursday from 6:00AM to 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, can be reached on (571) 272-1702. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956 (See **MPEP 203.08**).

A handwritten signature in black ink, appearing to read 'Thanh', with a stylized flourish extending to the right.

Thanh Nguyen  
Patent Examiner  
Patent Examining Group 2800

TTN